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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,822	07/18/2003	Naveen Thumpudi	3382-66124	3034

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EXAMINER

MCFADDEN, SUSAN IRIS

ART UNIT	PAPER NUMBER
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2626

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10/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/622,822

Applicant(s)

THUMPUDI ET AL.

Examiner

Susan McFadden

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-50 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1,16,17, are drawn to an algorithm, per se, or program performing such or medium resulting from such. Claims to processes that do nothing more than solve mathematical problems or manipulate abstract ideas or concepts are non-statutory. If the "acts" of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. Schrader, 22 F.3d at 294-95,30 USPQ2d at 1458-59. Thus, a process consisting solely of mathematical operations without some claimed practical application is drawn to non-statutory subject matter. In this case, the claims merely recite "outputting a bitstream". Signals are not patentable.

The features of the invention that would render the claimed subject matter statutory if recited in the claim is to include data input to the system and how it is measured and converted to the desired data. This would place the claims into a so-called "safe harbor" by requiring a physical act outside a computer (the physical input of speech and subsequent change of physical attributes thereof).

Another option would be to add limitations that indicate the practical use of the resultant data in an overall system.

For the claimed process to be statutory, the claim must either: (A) result in a physical transformation outside the computer for which a practical application is either

disclosed in the specification or would have been known to a skilled artisan (pre-computer or post-computer process activity), or (B) be limited to a practical application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-30 and 42-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (7,263,482) in view of Lee et al. (6,081,554).

In regard to claims 1,9-12,16-30, and 42-48, Chen et al. (7,263, 482) show that it is well known to have audio encoder system, method, and computer readable medium that regulates quality at a constant bitrate with a control strategy (Abstract) that produces an output bitstream of the media data at constant or relatively constant bitrate. Chen et al. does not specifically show encoding a sequence of media data using a trellis which includes plural nodes based upon quantization of buffer fullness levels for a virtual decoder buffer (Fig. 4, item 490) or encoder buffer. Lee et al. show that it is well known to use trellis in encoder coding (col. 6, ln 41-55). Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to add this feature because it provides optimal buffer control (col. 6, ln 41-55).

In regard to claims 2 and 3, Chen et al. (7,263, 482) show that it is well known to have audio encoder which discussed above which includes pruning according to a cost function (col. 2, ln 26-32) that considers noise to excitation ratio (Fig. 11).

In regard to claim 4, Chen et al. (7,263, 482) show that the cost function considers both quality and smoothness of quality changes (col. 28, ln 45-67).

In regard to claim 5, Chen et al. show the encoder above further comprising: storing encoded data for each of plural chunks encoded at each of plural quality levels; determining a trace through the sequence, wherein the trace includes a determination of a selected quality level for each of the plural chunks; and stitching together parts of the stored encoded data for the sequence along the trace to produce the output bitstream (Abstract).

In regard to claims 6-8, Chen et al. show the encoder discussed above. They do not specifically show that the encoding is two-pass encoding, latency windows, or delayed-decision encoding. The Examiner takes Official Notice that one of ordinary skill in the art would know how to add these encoding features. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to add these features because it provides more efficient encoding.

In regard to claims 13-15, Chen et al. show the encoder discussed above, wherein the outputting is to a persistent storage medium or a network connection and the outputting begins before the encoding ends (col. 9, ln 5-21, items 100, 170).

3. Claims 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (7,263,482) in view of Oguz et al. (6,937,770).

4. In regard to claims 49-50, Chen et al. show the encoder method and medium discussed above. Chen et al. do not specifically show that two pass encoding or delayed decision encoding of media data is performed. Oguz et al. show an encoder

that includes two-pass encoding and a constant bit rate. Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to add these features because it provides more efficient encoding.

Allowable Subject Matter


5. Claims 31-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Chen et al. shows that it is well known to use quality levels for a constant bitrate. In regard to claims 31 and 32, the prior art of record does not show or suggest in a media encoder, a computer-implemented method and medium of media encoding according to a control strategy, the method comprising: selecting between a two-pass encoding mode and a delayed-decision encoding mode; if the two-pass encoding mode is selected, in a first pass, encoding a sequence of media data to determine coding decisions for the sequence of media data; and in a second pass, encoding the sequence of media data to produce an output bitstream of the media data at constant or relatively constant bitrate; if the delayed-decision encoding mode is selected, encoding the sequence of media data, including enforcing simplification of a trace through the sequence of media data, if necessary, outside of a window of allowable latency; and outputting the bitstream.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan McFadden whose telephone number is 571-272-7621. The examiner can normally be reached on Monday-Friday, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Susan McFadden
Primary Examiner
Art Unit 2626

September 24, 2007